

min in group 1 and  $16.2 \pm 9.8$  min in group 2). The rate of major cerebral complications (fatal or non-fatal major stroke, minor stroke, PRIND, TIA or death) was 10.1% in group 1 and 6.7% in group 2 ( $p=0.042$ ). After the introduction of cerebral protection devices in April 2004, a significant reduction of the complication could be observed in all patients (11.1% without and 6.5% with protection). With respect to the two groups defined above, reduction was significant in group 1 (14.8% without and 7.1% with protection device [ $p=0.003$ ]) whereas in group 2 only a positive trend from 7.8% to 6.0% ( $p=0.402$ ) could be found.

**CONCLUSIONS** There are different peri-interventional complication rates in pts undergoing CAS depending on the vessel treated. The more complex anatomical situation at the origin of the left carotid artery might result in a more frequent mobilization of intraluminal plaque components from the aorta or the truncus brachiocephalicus. The significant reduction of cerebrovascular events when using filter devices corroborates this hypothesis.

**CATEGORIES ENDOVASCULAR:** Stroke and Stroke Prevention

**KEYWORDS** Carotid artery stenting, Carotid intervention, Carotid stenosis

#### TCT-754

##### Instant-restenosis after interventional treatment of carotid artery stenoses - a long term follow-up of a single center cohort

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**BACKGROUND** Instant-restenosis is a major issue after all intravascular interventional treatments applying stents. We retrospectively analyzed data from our center with respect to instant-restenosis rates in patients who had undergone carotid artery stenting (CAS) at our department.

**METHODS** We retrospectively analyzed 1137 consecutive patients (pts) with a mean age of  $71.7 \pm 38.6$  years who had undergone 1150 interventional procedures of the carotid arteries at our institution between December 1997 and January 2015. Post-interventional routine follow-up with an ultrasound examination was scheduled at one as well as six months after the procedure and after that on a yearly basis. Significant instant-restenosis was defined as a lumen narrowing  $>50\%$  within the stent as assessed by Doppler velocities of more than 200 cm/second. Patients were divided into two groups with respect to the stents used. 462 stenoses (40.2%) were treated with balloon-expandable stents (group 1), whereas the remaining 688 stenoses (59.8%) were treated with self-expandable stents (group 2).

**RESULTS** Long term follow-up with a mean duration of 38 months showed an instant-restenosis rate of 6.8% (78 pts) for the entire cohort. In group 1, instant-restenoses occurred in 54 pts (11.7%), in group 2, in 24 pts (3.5%;  $p<0.001$  for between group difference). Initial post-dilatation was performed in 81 pts (17.5%) in group 1 but in 564 pts (82.0%) in group 2 ( $p<0.001$ ). We found post-dilatation to significantly decrease the instant-restenosis rate in group 1 (post-dilatation vs. no post-dilatation:  $p=0.037$ ), but not in group 2 (post-dilatation vs. no post-dilatation:  $p=0.860$ ). In group 2, no difference was found between patients who were treated with tapered or non-tapered stents ( $p=0.114$ ), respectively.

**CONCLUSIONS** Instant-restenoses  $>50\%$  after CAS occurred infrequently during long term follow-up (6.8%) in our cohort. This statement held true especially for those patients who had been treated with self-expandable stents (3.5%). In patients who had been treated with balloon-expandable stents, post-dilatation reduced instant-restenoses significantly. The shape of self-expandable stents did not influence the instant-restenosis rate.

**CATEGORIES ENDOVASCULAR:** Stroke and Stroke Prevention

**KEYWORDS** Carotid artery stenting, Carotid intervention, Carotid stenosis

#### TCT-755

##### Switching from transfemoral to transradial approach of percutaneous carotid intervention

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**BACKGROUND** Recently transradial (TR) approach became a safe and effective alternative of percutaneous carotid intervention (CI). We

report the learning curve over 5 years in two high-volume interventional centers during the transition from transfemoral (TF) to transradial approach.

**METHODS** Between 2010 and 2014, 1541 patients underwent CI in our centers. Clinical characteristics, radiation doses, volume of contrast material, screening and procedure times of consecutive patients were recorded prospectively in a register and retrospectively analyzed.

**RESULTS** Transradial approach was applied in 323 patients, mean age was  $68 \pm 6$  years, 66% of them was male. The ratio of TR has grown from 3 to 7, 25, 43 and 48% of the CIs, during the years respectively. While the duration of the procedure ( $22.5$  vs.  $26$  min,  $p=0.016$ ), the fluoroscopy time ( $7.4$  vs.  $9.7$  min,  $p<0.001$ ) and the applied contrast material ( $90$  vs.  $128$  ml,  $p<0.001$ ) has significantly decreased. However, these parameters were independent of the type of the aortic arch. Conversion to TF was needed in 8.9% and remained stable. No difference was observed in the incidence of minor or major vascular events and hospitalization days, over the years.

**CONCLUSIONS** There was an initial learning curve for fluoroscopy time, contrast material. The change from TF to TR approach is achievable in 5 years in high-volume centers.

**CATEGORIES ENDOVASCULAR:** Stroke and Stroke Prevention

**KEYWORDS** Carotid artery stenting, Learning curve, Radial approach

#### TCT-756

##### CHADS2 and CHA2DS2-VASc Scores in Atrial Fibrillation: Which Patients Actually Have Strokes?

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**BACKGROUND** Ischemic stroke is a dreaded complication feared by patients (pts) with atrial fibrillation (AF). The CHADS2 & CHA2DS2-VASc scores are the gold standard for stroke risk stratification in AF pts; larger scores indicate higher risk of developing stroke and guide anticoagulation strategy. This study evaluates CHADS2 and CHA2DS2-VASc Scores in patients at the time of presentation with stroke.

**METHODS** We queried the institutional stroke data base in collaboration with the stroke service to identify all pts with AF who presented with an acute stroke. 86 consecutive pts with AF who presented with an acute stroke to an urban teaching hospital between 2011-2014 were analyzed.

**RESULTS** 46 pts (53.5%) were women and 40 pts (46.5%) were men, with mean age  $77.3 \pm 11.2$  years; 50 pts had persistent AF, 30 pts had paroxysmal AF, and 6 pts had new onset AF. Hypertension and obstructive sleep apnea were present in 93% and 4.7%, respectively. Only 2 pts (1.2%) had a CHADS2 score  $>5$ ; the score was 0-1 in 8 pts (9.3%). CHA2DS2-VASc score was low-intermediate risk (3-5) in 72.1% and only 16.3% pts had a score  $>5$ . The graphs show that the largest incidence of stroke occurred in pts with low to intermediate risk scores, not high risk. Warfarin was the prescribed anticoagulant in 31 pts, while only 3, 2, and 1 pts respectively were taking rivaroxaban, dabigatran, and apixaban. The INR at the time of stroke for pts on warfarin was therapeutic in 6 pts, sub-therapeutic in 20 pts, and super-therapeutic in 5 pts. Reasons for the absence of anticoagulation in the other 49 pts included non-compliance, bleeding history, high fall risk, perioperative condition, physician decision, and patient refusal.

